WRITTEN DECISION   International file reference
OF THE INTERNATIONAL
EXAMINATION AUTHORITY (SUPPLEMENTARY SHEET)   PCT/EP2004/051266

Re. Point V

Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statements

1. **Prior art:**

   Reference is made to the following documents:

   D1: M. DEJORI, M. STETTER:"Estimation of oncogenes by Bayesian inverse modeling of gene-compression patterns", Abstract of poster, ISMB 2003, Brisbane, Australia, June 29 - July 3, 2003, found on the Internet:URL:www.iscb.org/ismb2003/posters/mathaeus.dejori.externalATmchp.siemens.de_109.html >

   D2: M. DEJORI:"Analyzing gene-expression data with Bayesian networks", Master Thesis, Graz, June 2002, found on the Internet:URL:http://genome.tugraz.at/Theses/Dejori2002.pdf>

   D3: FRIEDMAN N.ET AL:"Using bayesian networks to analyze expression data" JOURNAL OF COMPUTATIONAL BIOLOGY, MARY ANN LIEBERT, LARCHMONT, NY, US, Vol. 7, No. 3/4, 2000, pages 601-620, ISSN:10665277

   D4: YOO C ET AL:"Discovery of causal relationships in a gene-regulation pathway from a mixture of experimental and observational DNA microarray data." PACIFIC SYMPOSIUM ON BIOCOMPUTING. PACIFIC SYMPOSIUM ON BIOCOMPUTING, 2002, pages 498-509

2. **Novelty**

2.1 The present application does not fulfill the requirements of Article 33(1) PCT because the object of Claim 1 is not novel in the sense of Article 33(2) PCT.

2.2 <u>Claim 1:</u>

Document D1 discloses (the references in brackets relate to this document):

> Method for analysis of a regulatory genetic network of a cell using a causal network, said causal network describing the regulatory genetic network of the cells such that nodes of the causal network represent genes of the regulatory genetic network and connectors of the causal networks represent regulatory interactions between the genes of the regulatory genetic network,
>
> a) in which a selected gene of the regulatory genetic network a gene expression rate is predetermined,
>
> b) in which, using the causal network for the predetermined gene expression rate, a resulting gene expression pattern for the regulatory genetic network is generated;
>
> c) in which the generated resulting gene expression pattern is compared with a predetermined gene expression pattern of the regulatory genetic network (abstract).

The object of the indpendent claim 1 is thus not novel.

3. Inventive step

3.1 The present application does not fulfill the requirements of Article 33(1) PCT because the object of claims 2 through 24 is not based on an inventive step in the sense of Article 33(3).

3.2 Claims 22, 24:

> The person skilled in the art would see it as an obvious, normal measure to provide a computer program product with program code-means or a computer program product with program code-means stored on a machine-readable data medium

in order to perform all known steps in accordance with
claim 1.

3.3 <u>Claims 2 - 21, 23:</u>

The dependent claims 2 through 21 and 23 do not appear to
contain any features, which in combination with the
features of any claim to which they relate, meet the
requirements of the PCT in relation to novelty or inventive
step, see documents D1 through D4 and the corresponding
sections of text specified in the search report.